



Six Modern Plagues and How We Are Causing Them

By Mark Jerome Walters

Washington, DC: Island Press, 2003.

206 pp. ISBN: 1-55963-992-X, \$22 cloth.

Epidemics are regular fare on the nightly news. First AIDS, then Lyme disease, mad cow disease, West Nile, and most recently SARS have rightfully captured widespread public attention, albeit usually through 15-second sound bite reporting. In *Six Modern Plagues*, Mark Jerome Walters writes about these and other new epidemic disease emergences

and attempts to uncover underlying common

themes. His main thesis, lest it be missed, is the subtitle of

the book: *And How We Are Causing Them*. He argues that the origins of all these epidemics can be traced back to changes that humans have wrought in the natural environment. This is an important topic, and Walters writes in a clear, nontechnical style that should be easily accessible to the general reading public.

All six of the very brief chapters—vignettes, actually—although very short, are well done. The first four full chapters are especially readable. In these, the author has traveled to the site of the epidemic outbreak and interviewed in person the common folk who were there at the beginning. For example, the musings of West Sussex farmer Peter Stent on his first encounter with mad cow, “Spooky behavior for these kindly animals,” adds a welcome human dimension to early days of mad cow disease. Likewise, the personal tale of Burlington, Vermont, farmer Cynthia Hawley’s near fatal infection with the antibiotic-resistant DT104 *Salmonella* strain is riveting, and her bitter grumbling during convalescence that the word “farm” is becoming a misnomer. It’s pretty much an industry now” trenchantly illustrates how she was swept up in macroeconomic events beyond her control. It is in this in-person “reportage” style that Walters is at his best.

While this book should appeal to popular audiences, from a scientific perspective it is nonetheless solid. The factual material is usually

correct, but there are some minor misstatements: Mad cow was not “first isolated in ... 1986” (p. 15); simian immunodeficiency viruses were not “known for some time” before the late 1980s (p. 53); and an infected arriving human could not have been the origin of the West Nile epidemic in Queens, New York (p. 141). But these are minor inaccuracies in otherwise solid scientific stories. Walters’ single foray into theory, in the introduction, on how our microbial pathogens are “r-selected” but we humans are “K-selected,” seems well-intentioned but distracting from his main thesis that ecologic disturbances lead to epidemics.

The important question is, of course, does the author provide adequate support for his main thesis that human disturbances of the environment are responsible for these newly emerged epidemics? Or are these just a collection of pretty “just-so” stories? Faced with bona fide threats from genetically modified microbes and synthetic viruses, and the spectrum of epidemics from biowarfare, bioterrorism, and biobungling (accidental pathogen creation and/or escape), how important is ecologic disturbance in the generation of new threats?

A tall order, to be sure, but my own assessment is that—through no fault of his own—Walters fails to tie the knot in each story. The exact actual mechanisms of how microbes move from natural reservoirs into humans is simply not known for most of the examples he relates. Although it makes good sense that viruses in chimpanzees may have been important in the genesis of the AIDS pandemic, the linkage to bush-meat hunting is still speculative. Or in the case of antibiotic resistant *Salmonella*, yes, plasmids may be spawned in fish farms in Thailand, but the case is hardly ironclad. Although I am inclined to believe these mechanisms of epidemic emergence may be true, as a scientist I think the evidence falls short of the indictment in the subtitle “and how we are causing them.”

At 156 pages of text and a size of 5 × 8 inches, this is a tiny—too tiny—book, and therefore at a list price of \$22 it is no bargain. Indeed, it is a shame that both the physical length and intellectual depth of the book are not greater.

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